

CLAIMS

What is claimed is:

1. A dual-mode speaker capable of automatically reproducing audio from either an analog or a digital source comprising;
a speaker input;
means for detecting digital audio connected to said speaker input;
a digital-to-analog converter connected to said speaker input for converting a digital input signal into an analog signal;
a multiplexer for switching from said speaker input to the analog signal from the digital-to-analog converter when said means to detect digital audio detects a digital audio signal;
an amplifier connected to the output of said multiplexer;
and a speaker connected to the output of said amplifier.
2. A dual-mode speaker as in claim 1, wherein said means for detecting digital audio includes a filter that detects a range of frequencies.
3. A dual-mode speaker as in claim 1, wherein said means for detecting digital audio includes a filter that detects frequencies above a predetermined frequency.
4. A dual-mode speaker as in claim 1, wherein said means for detecting digital audio includes a filter that detects frequencies below a predetermined frequency.

1 5. A dual-mode speaker as in claim 1, wherein said means for detecting digital audio
2 includes a packet header detector.

1 6. A dual-mode speaker as in claim 1, wherein said digital-to-analog converter
2 recognizes USB digital signals and packets and converts them to analog audio
3 signals.

1 7. A dual-mode speaker as in claim 1, wherein said digital-to-analog converter
2 recognizes S/PDIF digital signals and packets and converts them to analog audio
3 signals.

1 8. A multi-mode speaker capable of automatically reproducing audio from either an
2 analog or a digital source comprising;

3 a speaker input;

4 means for detecting digital audio capable of detecting at least one form of
5 digital audio connected to said input;

6 one or more digital-to-analog converters connected to said input for
7 converting at least one form of encoded digital audio from said input signal
8 into at least one analog signal;

9 a multiplexer for switching from said speaker input to the analog signal from
10 the one of more digital-to-analog converters when said means for detecting
11 digital audio detects a corresponding digital audio content;

12 an amplifier connected to the output of said multiplexer;

13 and a speaker connected to the output of said amplifier.

1 9. A multi-mode speaker as in claim 8, wherein said means for detecting digital
2 audio includes a filter to detect a range of frequencies.

1 10. A dual-mode speaker as in claim 8, wherein said means for detecting digital audio
2 includes a filter that detects frequencies above a certain frequency.

1 11. A dual-mode speaker as in claim 8, wherein said means for detecting digital audio
2 includes a filter that detects frequencies below a certain frequency.

1 12. A multi-mode speaker as in claim 8, wherein said means for detecting digital
2 audio includes a packet header detector.

1 13. A multi-mode speaker as in claim 8, wherein said at least one digital-to-analog
2 converter recognizes USB digital signals and packets and converts them to analog
3 audio signals.

1 14. A multi-mode speaker as in claim 8, wherein said at least one digital-to-analog
2 converter recognizes S/PDIF digital signals and packets and converts them to
3 analog audio signals.

1 15. An apparatus, comprising;

2 a speaker input signal;

3 means for detecting digital audio;

4 means for converting a digital signal into an analog signal;

5 an amplifier;

6 a speaker connected to the output of said amplifier, and;

7 a means to switch the input of said amplifier between said speaker input signal
8 to the analog signal from said means for converting a digital signal into an
9 analog signal corresponding to the detection of the digital signal in the speaker
10 input signal.

1 16. An apparatus as in claim 15, wherein said means for detecting digital audio
2 includes a filter to detect a range of frequencies.

1 17. An apparatus as in claim 15, wherein said means for detecting digital audio
2 includes a filter that detects frequencies above a predetermined frequency.

1 18. An apparatus as in claim 15, wherein said means for detecting digital audio
2 includes a filter that detects frequencies below a predetermined frequency.

1 19. An apparatus as in claim 15, wherein said means for detecting digital audio
2 includes a packet header detector.

1 20. An apparatus as in claim 15, wherein said means for converting a digital signal
2 into an analog signal includes decoding USB digital signals and converting the
3 digitally encoded audio into an analog signal.

1 21. An apparatus as in claim 15, wherein said means for converting a digital signal
2 into an analog signal includes decoding S/PDIF digital signals and converting the
3 digitally encoded audio into an analog signal.

1 22. An apparatus as in claim 15, wherein said means to switch the input of said
2 amplifier is a multiplexer.

1 23. An apparatus as in claim 15, wherein said means to switch the input of said
2 amplifier is an analog switch.